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| NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE | HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi |
| MONTHLY REPORT OF HYDROLOGIC CONDITIONS | | REPORT FOR: MONTH YEAR September 2012 |
| TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283 | | SIGNATURE Alan E. Gerard, Meteorologist In-Charge DATE 10/15/2012 |

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐ An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

The month of September was much less active than August. The passage of several cold fronts brought a touch of fall to the region. Temperatures for the month were near normal across the Hydrologic Service Area (HSA). Temperatures ranged from 1.0 degree below normal at Meridian, MS to 0.9 degrees above normal at Greenville, MS. Rainfall was above normal throughout most of the region. Northwest portions of the HSA had the greatest above normal rainfall ranging from 200 to 400 percent of normal rainfall. Below normal rainfall occurred across portions of Central and East Central Mississippi where totals ranged from 50 to 75 percent of normal.

The month began with the remnants of Hurricane Isaac over of Missouri on the 1st moving into southern Indiana by the 3rd. Warm and humid conditions left in the wake of Isaac allowed for scattered showers and thunderstorms across the HSA for the 1st and 2nd. Rainfall was less than 1.50 inches across the area. From the 3rd into the morning of the 4th, the combination of a weak front and lingering upper level energy from Isaac sparked off isolated severe storms. These storms caused a few instances of damaging winds and flash flooding across the Golden Triangle area where 3.00 to 5.00 inches of rainfall fell. Additional isolated severe storms, producing large hail and damaging winds, occurred on the afternoon of the 4th across Southeast Mississippi.

On the 5th, remnants of Hurricane Isaac moved down from the Ohio Valley back into the Gulf of Mexico, and remained quasi-stationary off of the Southeast Louisiana Coast from late on the 5th through the 8th. Warm and humid air across the HSA allowed for isolated to scattered showers. A cold front pushed across the region on the 8th. High pressure moved into the area behind the front on the 9th bringing a taste of fall into the ARKLAMISS region. Rainfall from 0.25 to 1.50 inches fell in Northeast Louisiana, Southeast Arkansas, and in portions of the Yazoo Delta Region.

From the 10th to 12th, high pressure continued with low humidity and pleasant temperatures. Temperatures and humidity increased on the 13th and

14th as a weak front approached the area. The front crossed the area on the 15th with only light isolated to scattered showers. High pressure built back into the area on the 16th. A low pressure system formed in the Gulf of Mexico off of the Southwest Louisiana Coast on the 17th and moved through South Mississippi into Central Alabama by the 18th. Rainfall amounts ranged from 0.25 to 3.00 inches across the HSA. High pressure moved in during the day on the 18th and remained in place through the 22nd. Delightful fall temperatures and low humidity dominated the region. A dry cold front pushed through the area on the 23rd reinforcing the high pressure from prior days. High pressure remained in control of the weather through the 27th. Late on the 24th, a few light showers moved across Grenada and Leflore counties in Mississippi due to a disturbance in the upper level northwest flow.

A cold front pushed southward on the 28th and stalled along a line from Lake Providence, Louisiana to Tupelo, Mississippi by the morning of the 29th. A low pressure center formed in Texas along the front and moved into western Louisiana by the morning of the 30th. The front moved into Northeast Mississippi by the morning of the 1st. This system brought heavy rainfall and gusty winds to most of the HSA. Heavy rainfall totals ranged from 2.00 to 8.00 inches across the HSA. With the saturated soil across the area, gusty winds knocked down multiple trees, especially in Northwest Mississippi.

River and Soil Conditions...

Soil Moisture Map:

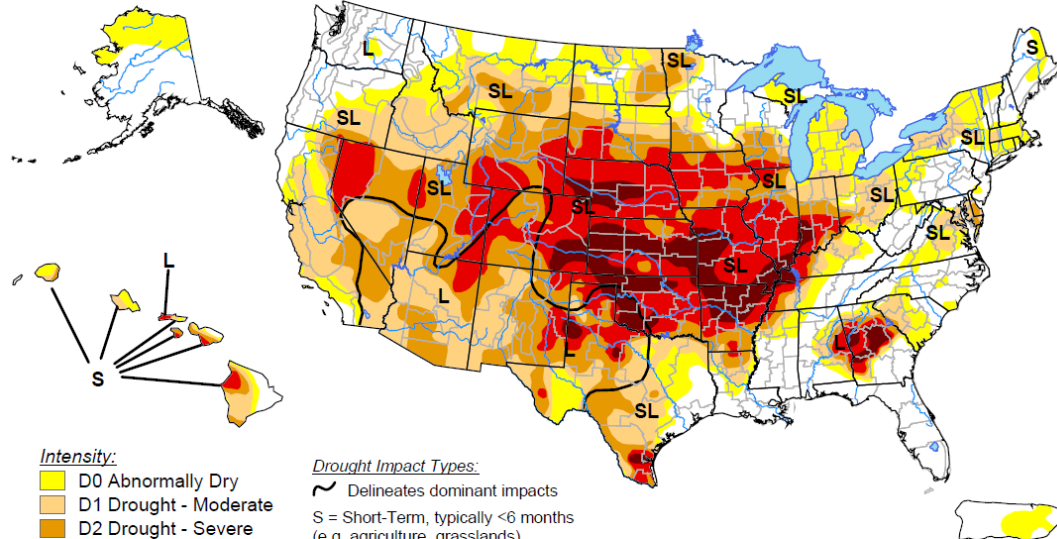
Soils remain moist across most of the Hydrologic Service Area.
Map is unavailable for September

Drought Comparison to prior month:

U.S. Drought Monitor

August 28, 2012

Valid 7 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, August 30, 2012

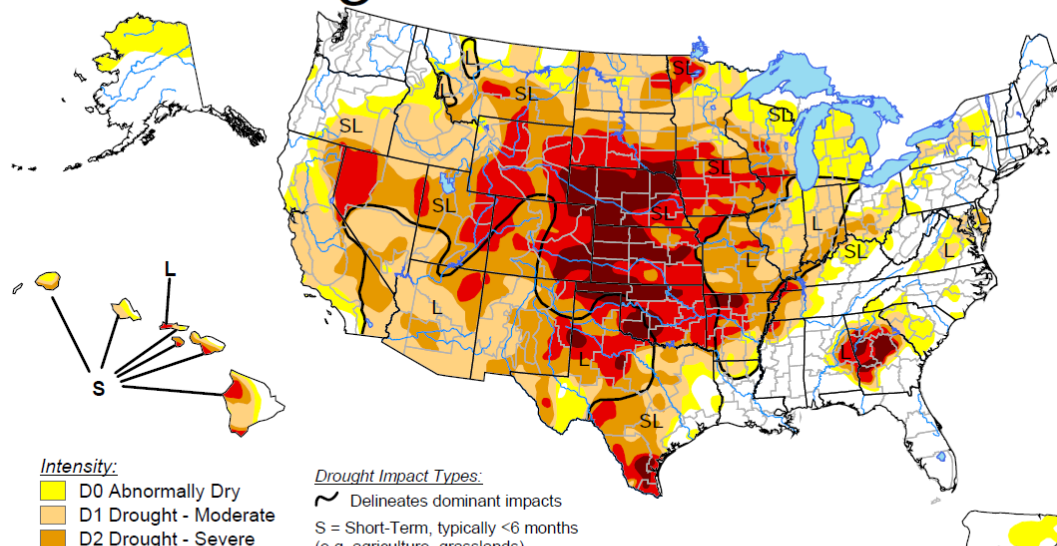
Author: Brian Fuchs, National Drought Mitigation Center

August 28, 2012

U.S. Drought Monitor

September 25, 2012

Valid 7 a.m. EDT



Intensity:

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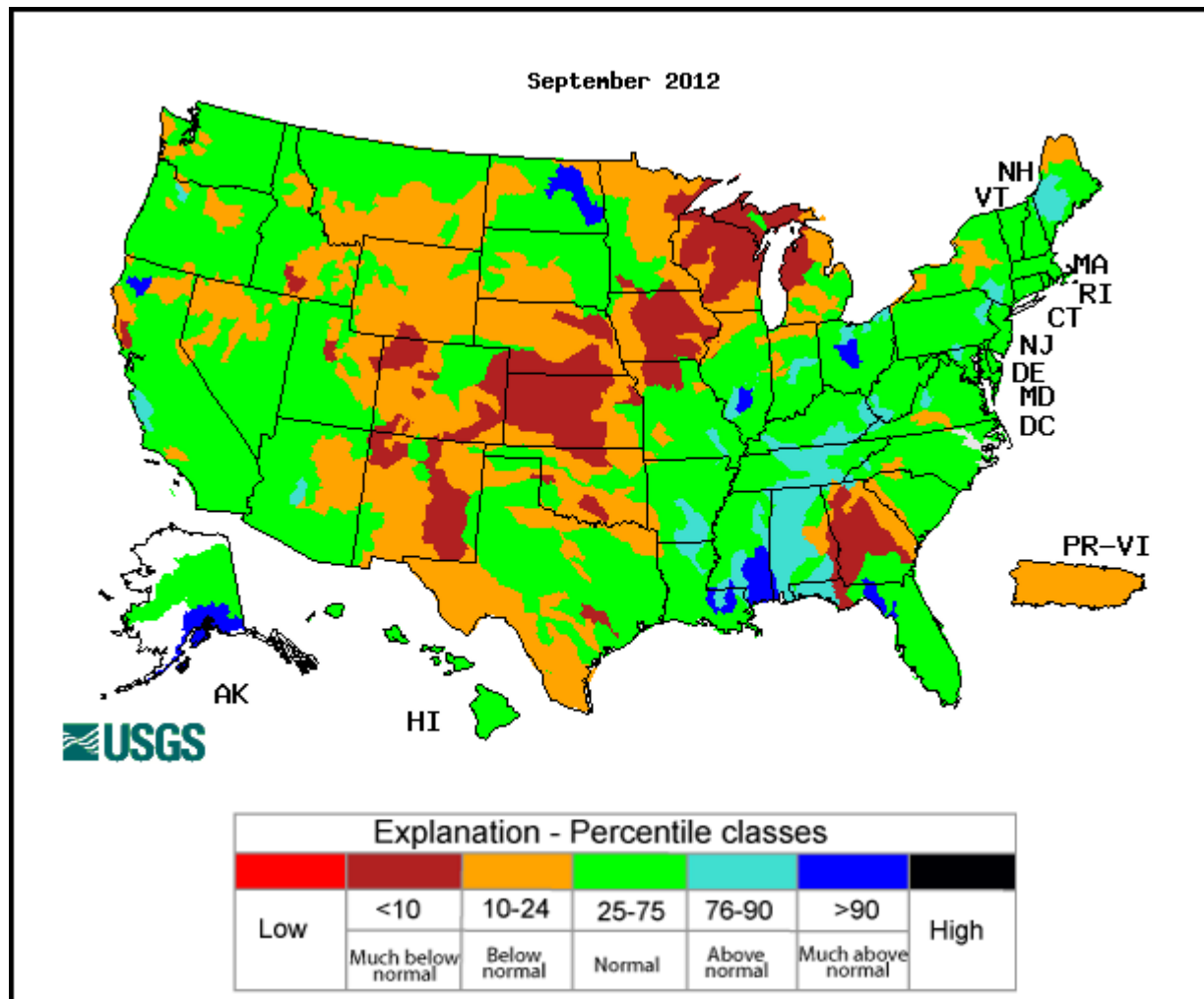
Released Thursday, September 27, 2012

Author: Anthony Artusa, NOAA/NWS/NCEP/CPC

September 25, 2012

Streamflow:

The United States Geological Survey's (USGS) September 2012 river streamflow records were compared with all historical September streamflow records. Streamflow continued to be much above normal across the Pascagoula River System. Above normal streamflow was reported along the Lower Pearl and portions of the Tombigbee River Systems. All other river systems had normal streamflow.



September Streamflow

River Conditions and flood potential:

Runoff from heavy rainfall in the upper reaches of the Tallahala Creek from Hurricane Isaac in the latter days of September reached Laurel on the 2nd pushing the creek to within a half foot of moderate flood stage. The Lower Pearl River at Monticello rose to a foot below flood stage on the 1st of the month with the Pearl River at Columbia rising to a half foot below flood stage a day later. The remaining rivers and streams across South Mississippi and portions of Central Mississippi continued to fall during the first week September. Rainfall from Isaac actually produced rises in Southeast Arkansas along the Bayou Bartholomew for the first week and half of the month.

For the remainder of the month, rivers were fairly steady with only a few minor rises associated with several rainfall events during the month.

Stages along the Mississippi River continued to remain well below normal levels.

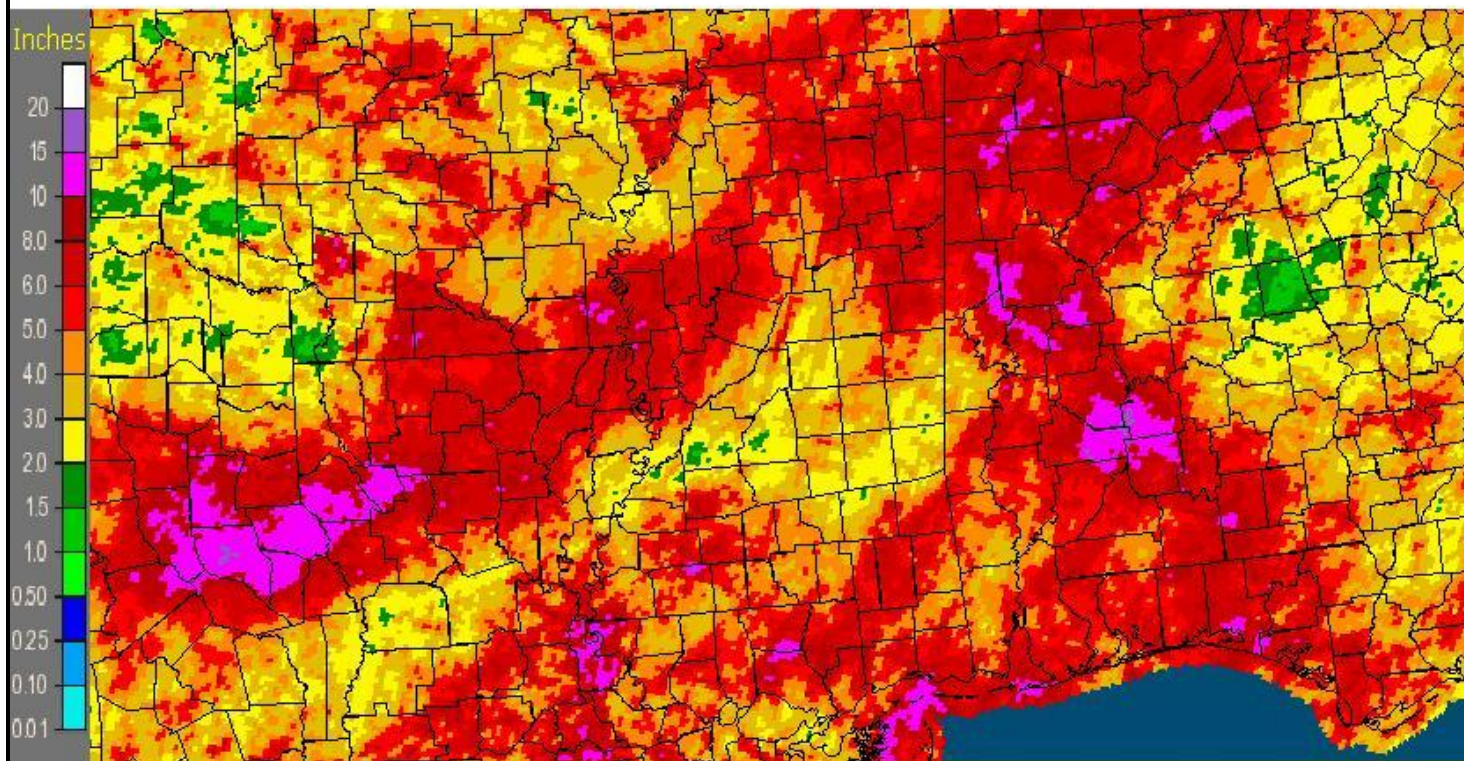
Temperatures have equal chances of being below or above normal across the HSA over the next 3 months while rainfall is expected to be above normal. Based on current soil moisture, streamflow, and the 3 month weather outlooks, flood potentials are as follows:

| | |
|---------------------------------------|---------------------------|
| <i>Pearl River System:</i> | Average to above average. |
| <i>Yazoo River System:</i> | Average. |
| <i>Big Black River System:</i> | Average. |
| <i>Homochitto River System:</i> | Above average. |
| <i>Pascagoula River System:</i> | Above average. |
| <i>Northeast LA and Southeast AR:</i> | Average. |
| <i>Tombigbee River System:</i> | Average. |
| <i>Mississippi River:</i> | Average. |

Rainfall for the month of September:

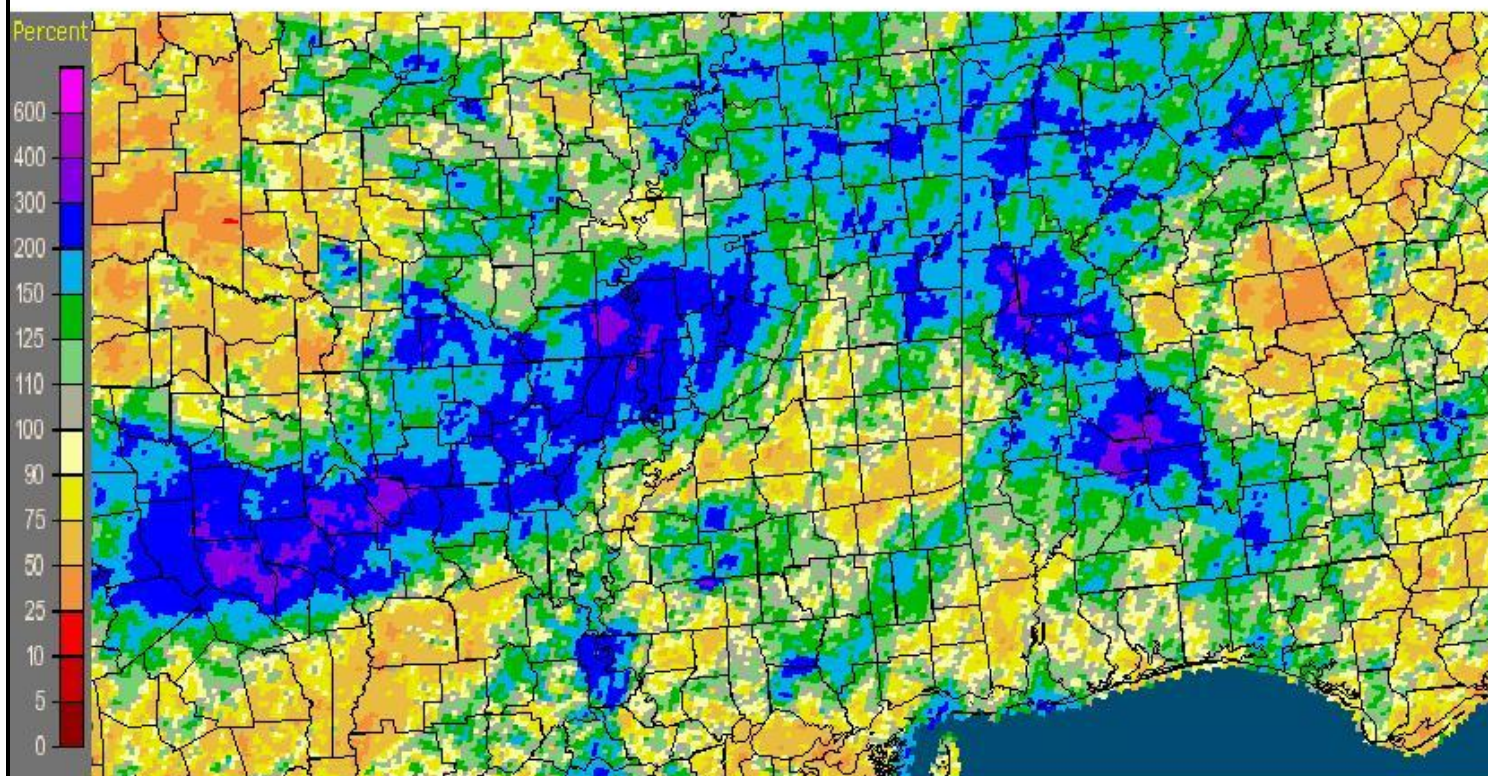
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on August 31st until 7 am on September 30th were: 8.60 inches at Brookhaven, MS; 7.66 inches at Macon, MS; 7.02 inches at Satartia, MS; 6.43 inches at Purvis, MS; 6.28 inches at Hazlehurst, MS; 6.16 inches at Jonesville, LA; 5.86 inches at Lake Providence, LA; 5.60 inches at Hattiesburg, MS; 5.36 inches at MSU Starkville, MS; 5.30 inches at Larto Lake, LA; and 5.28 inches at Meadville 5SE, MS.

Mississippi: September, 2012 Monthly Observed Precipitation
Valid at 10/1/2012 1200 UTC- Created 10/3/12 21:38 UTC



September 2012 Rainfall Estimates

Mississippi: September, 2012 Monthly Percent of Normal Precipitation
Valid at 10/1/2012 1200 UTC- Created 10/3/12 21:41 UTC



September 2012 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

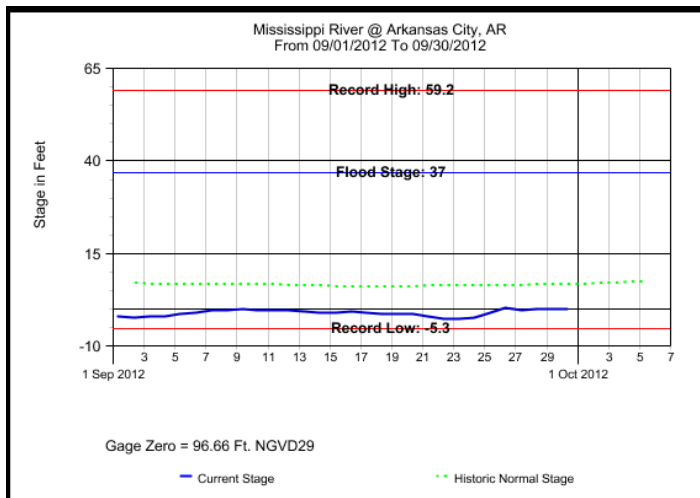
September rainfall for Selected Cities...

| City (Airport) | September Rainfall | Departure from normal | 2012 Rainfall | 2012 Departure from Normal |
|-----------------|-----------------------|--------------------------|------------------|-------------------------------|
| Jackson, MS | 4.12 | +1.09 | 56.83 | +16.52 |
| Meridian, MS | 3.63 | +0.20 | 49.35 | +6.96 |
| Greenwood, MS | 6.84 | +3.18 | 34.23 | -3.50 |
| Greenville, MS | 6.06 | +2.98 | 33.64 | -4.51 |
| Hattiesburg, MS | 5.89 | +1.81 | 59.25 | +13.01 |
| Vicksburg, MS | 4.48 | +1.59 | 43.58 | +4.12 |

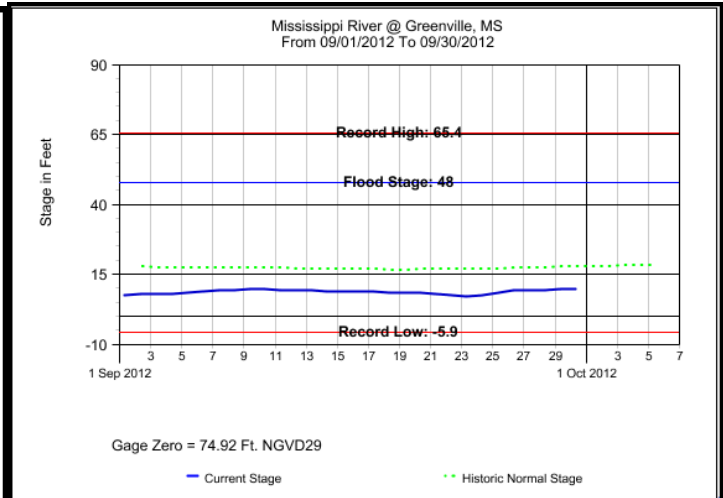
Mississippi River...

Mississippi River Plots for September, 2012

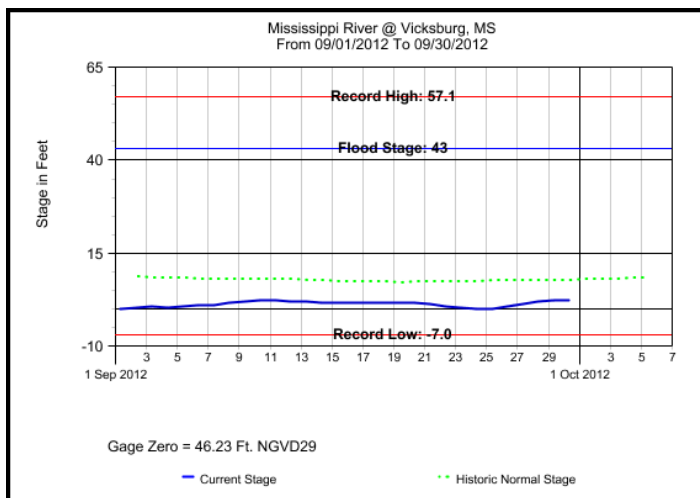
Plots Courtesy of the United States Army Corps of Engineers



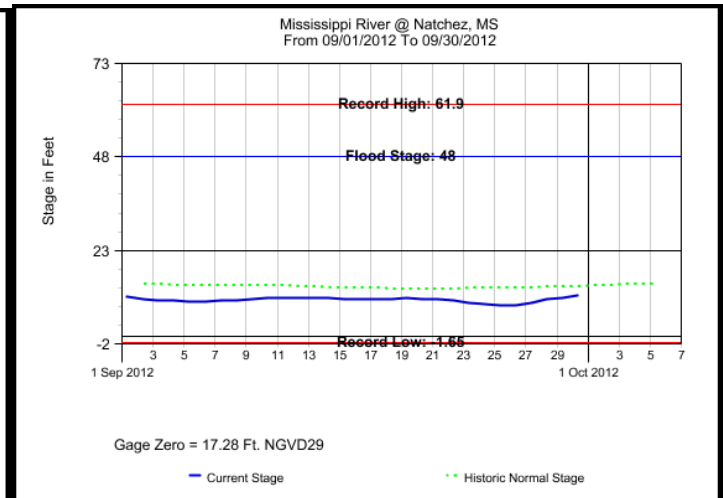
ARKANSAS CITY, AR



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

| Location | FS | High Stage(ft) | Date | Low Stage(ft) | Date |
|-------------------|----|----------------|----------|---------------|----------|
| Arkansas City, AR | 37 | 0.09 | 09/28/12 | -2.66 | 09/23/12 |
| Greenville, MS | 48 | 9.78 | 09/30/12 | 7.26 | 09/23/12 |
| Vicksburg, MS | 43 | 3.15 | 09/30/12 | -0.21 | 09/25/12 |
| Natchez, MS | 48 | 11.04 | 09/30/12 | 8.22 | 09/25/12 |

